

Amendments to the Claims

The following list of claims will replace all prior lists of claims in the application.

List of Claims:

1.-35. (Cancelled)

36. (Currently Amended) A method comprising:

- a) providing a plasma sample from the a subject, said plasma sample comprising genomic DNA, wherein said genomic DNA comprises a plurality of promoters from different genes;
- b) isolating and digesting said genomic DNA with a methylation sensitive restriction enzyme under conditions such that unmethylated CpG islands in said promoters are cleaved while methylated CpG islands in said promoters are not cleaved;
- c) contacting said digested genomic DNA with gene specific primers, wherein said gene specific primers are configured to hybridize to said genomic DNA and amplify different promoters from different genes including DAPK, FAS, MCT1, p16, PAX5, THBS, TRANCE, and VHL, and wherein said contacting is under conditions such that fragments of said plurality of promoters comprising uncleaved CpG islands are amplified, while cleaved promoters comprising cleaved CpG islands are not amplified; and
- d) detecting the presence or absence of DNA methylation in each of said plurality of promoters based on the amplification, or lack of amplification, of said fragments to generate a methylation profile for said subject.

37. (New) The method of claim 36, wherein said method further comprises comparing said methylation profile to one or more standard methylation profiles, wherein said standard methylation profiles are selected from the group consisting of methylation profiles of non-cancerous samples and methylation profiles of cancerous samples.

38. (New) The method of claim 36, wherein said methylation-sensitive restriction enzyme comprises Hin6I.

39. (New) The method of claim 36, further comprising the step of i) separating said plasma sample into a control sample and an experimental sample, and ii) adding control nucleic acid to both said control and experimental samples, wherein said control nucleic acid comprises at least one known CpG island that is unmethylated.

40. (New) The method of claim 39, wherein said control sample is not exposed to said digesting and said experimental sample is exposed to said digesting, and wherein both said control and experimental samples are contacted with primers specific for said control nucleic acid under conditions such that a fragment of said control nucleic acid is amplified only if said known CpG island is uncleaved.

41. (New) The method of claim 40, further comprising comparing any fragments amplified in said control and experimental samples to confirm that said digesting in step b) is complete.

42. (New) The method of Claim 37, wherein said digesting is performed to completion.